

### **REMARKS**

Claims 1-38 were pending in the present application. Claims 1, 7, 15, 24, and 35 have been amended to clarify claimed subject matter and/or correct informalities. Support for the amendment may be found in the original specification at least at pages 2, 9, 11 and Figure 2. No new matter has been introduced by these amendments.

Applicant has amended the Specification to correct informalities by adding the reference numbers in the detailed description. Support for the reference numbers may be found in the original Figures 1, 4, 5, and 6. Again, no new matter has been introduced.

Claims 1-38 are for consideration upon entry of the present Amendment. Applicant requests favorable consideration of this response and allowance of the subject application based on the following remarks.

#### **Objection to the Drawings**

The drawings are objected to by the Office for failing to comply with 37 CFR 1.84(p)(5) because they include reference character(s) not mentioned in the description. Applicant currently amends the Specification by inserting reference characters into the description in compliance with 37 CFR 1.121(b). Support for the reference numbers may be found in the original Figures 1, 4, 5, and 6. This objection is now moot.

**Claim Rejections 35 U.S.C. §101**

Claims 24-34 stand rejected under 35 U.S.C. §101 as being allegedly directed to non-statutory subject matter. Applicant respectfully disagrees with the Office.

**Claim 24** recites in part:

One or more computer-readable media containing computer-executable instructions that, when executed by a computer, perform the following steps:

In setting forth a ground of rejection, the Office states “data signals are not tangible,..... Computer program or processes are only realized within the computer when stored in a memory or storage elements (such as RAM or ROM)”.

Applicant directs the Office to the original Specification, page 26, lines 8 to 12, to clarify the definition of computer-readable media:

“Computer storage media” includes volatile and nonvolatile, removable and non-removable media implemented in any method or technology for storage of information such as computer-readable instructions, data structures, program modules, or other data. Computer storage media includes, but is not limited to, RAM, ROM, EEPROM, flash memory or other memory technology, CD-ROM,

The evidence shows computer storage media includes media for storage of information, such as computer-readable instructions. The computer storage media includes RAM and ROM. Therefore, these claims currently comply with 35 U.S.C. §101 and as a result, the rejection is moot. Applicant respectfully requests withdrawal of the §101 rejections.

**Claim Rejections 35 U.S.C. §102**

Claims 1-38 are rejected under 35 U.S.C. §102(b) as being anticipated by non-patent literature titled "Efficient Filtering of XML Documents for Selective Dissemination of Information" by Mehmet Altinel, et al., 26<sup>th</sup> VLDB Conference, 2000, page 53-64 (hereinafter "Altinel"). Applicant respectfully traverses this rejection. Anticipation under §102 requires that each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference (MPEP §2131).

Without conceding the propriety of the stated rejections, and only to advance the prosecution of this application, Applicant has amended **independent Claim 1**, to clarify further features of the subject matter. **Claim 1** now recites:

A method, comprising:  
receiving an input, wherein the input comprises elemental language units;  
generating at least some of the elemental language units into opcodes;  
traversing an opcode tree of hierarchical nature that includes a plurality of opcode nodes which together define opcodes that should be executed to evaluate a plurality of queries;  
executing each of the opcode nodes in the opcode tree as each opcode node is encountered in the traversal to evaluate the plurality of queries against the input;  
maintaining the opcode tree that is used during processing by making a copy of the opcode tree; and  
updating the opcode tree copy.

**Altinel Does Not Disclose Recited Features of Claim 1**

Altinel does not disclose expressly or inherently "elemental language units, generating at least some of the elemental language units into opcodes, maintaining the opcode tree that is used during processing by making a copy of the opcode tree, and updating the opcode tree copy", as recited in Claim 1. Altinel is directed to XML-based

SDI system and the XPath language (page 54, section 1). The evaluation of XPath pattern yields an object whose type can be either a node set (i.e., an unordered collection of nodes without duplicates), a boolean, a number, or a string (page 54, section 2.2). The SAX event-based interface reports parsing events and does not usually build an internal tree (page 57, section 4.2). In Altinel, the document generator always starts from the root of the DTD, while the query generator may start at any level depending on which element node it initially chooses (page 60, section 6.2).

The Office cites Altinel for executing each of the opcode nodes in the opcode tree as each opcode node is encountered in the traversal to evaluate the plurality of queries against the input (Office Action, page 4-5). Applicant respectfully disagrees because Altinel mentions not building an internal tree in parsing events and the query generator may start at any level depending on which element node it initially chooses.

The evidence is insufficient to support a prima facie anticipation rejection of the claimed subject matter. Consequently, Applicant respectfully submits that Claim 1 is not anticipated by Altinel and requests that the §102 rejection be withdrawn.

**Independent Claims 24 and 35** as amended recites features similar to those in Claim 1 and hence benefits from the same arguments directed above to Claim 1.

**Dependent Claims 2-6, 25-34, and 36-38** depend directly or indirectly from one of independent Claims 1, 24, and 35, and are allowable by virtue of this dependency, as well as for the additional features that they recite.

**Altinel Does Not Disclose Recited Features of Claim 7**

Turning now to **Independent Claim 7**, which recites:

An opcode tree data structure stored on one or more computer-readable media, comprising a plurality of hierarchical opcode nodes that represent a plurality of opcodes that are executed as each opcode node is encountered to evaluate a set of queries represented by the opcode tree, wherein the opcode tree that is used during processing is copied and updated.

in response to changes in the document.

Altinel does not disclose expressly or inherently “an opcode tree data structure, hierarchical opcode nodes, plurality of opcodes that are executed as each opcode node is encountered, opcode tree is copied and updated”, as recited in Claim 7. Consequently, Applicant respectfully submits that Claim 7 is not anticipated by Altinel and requests that the §102 rejection be withdrawn.

**Dependent Claims 8-14** depend directly or indirectly from independent Claim 7, and are allowable by virtue of this dependency, as well as for the additional features that they recite.

**Altinel Does Not Disclose Recited Features of Claim 15**

Turning now to **Independent Claim 15**, which recites:

A query evaluation system, comprising:

a language analysis module generating elemental language input into opcodes;

an opcode tree of hierarchical nature stored in memory and containing opcode nodes that include opcode objects corresponding to a plurality of queries, each opcode object that is common to multiple queries being represented by a single opcode node;

a query processor configured to execute each opcode node as encountered of the opcode tree one time to evaluate the plurality of queries; and

the opcode tree that is used during processing by the query processor is copied and updated.

Altinel does not disclose expressly or inherently "a language analysis module generating elemental language input into opcodes, opcode tree of hierarchical nature, the opcode tree copied and updated", as recited in Claim 15. Consequently, Applicant respectfully submits that Claim 15 is not anticipated by Altinel and requests that the §102 rejection be withdrawn.

**Dependent Claims 16-23** depend directly or indirectly from independent Claim 15, and are allowable by virtue of this dependency, as well as for the additional features that they recite.

### **Conclusion**

Claims 1-38 are in condition for allowance. Applicant respectfully requests reconsideration and prompt allowance of the subject application. If any issue remains unresolved that would prevent allowance of this case, the Office is requested to contact the undersigned attorney to resolve the issue.

Respectfully Submitted,

Lee & Hayes, PLLC  
421 W. Riverside Avenue, Suite 500  
Spokane, WA 99201

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By: Shirley Lee Anderson  
Shirley Lee Anderson  
Reg. No. 57,763  
(509) 324-9256 ext. 258